

Rpt. 4.

## REPORT ON MACHINERY

No. 74583

Received at London Office

SAT. 6 AUG. 1921

Date of writing Report

19

When handed in at Local Office

3.8.

1921 Port of

NEWCASTLE-ON-TYNE

No. in Survey held at  
Reg. Book.

Date, First Survey

23 May

Last Survey

26 July 1921

(Number of Visits)

on the

S.S. "Woron"

ex "Naimen"

Tons } Gross  
Net

Master

Built at

Vegeasack

By whom built

Bremer Vulkan

When built

1907

Engines made at

Vegeasack

By whom made

Bremer Vulkan

when made

1907

Boilers made at

By whom made

when made

1907

Registered Horse Power

Owners

Glover Bros.

Port belonging to

London

Nom. Horse Power as per Section 28

551

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes.

ENGINES, &amp;c.—Description of Engines

Quadruple Expansion

No. of Cylinders

4

No. of Cranks

4

Dia. of Cylinders

24 3/4" 34 3/4" 50 3/4" 73"

Length of Stroke

53 3/8"

Revs. per minute

70?

Dia. of Screw shaft

as per rule 15.35"

Material of

as fitted 15 1/2" screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Yes.

Is the after end of the liner made water tight

in the propeller boss

Yes.

If the liner is in more than one length are the joints burned

Yes.

If the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

Yes.

If two

liners are fitted, is the shaft lapped or protected between the liners

Yes.

Length of stern bush

5'-3 3/4"

Dia. of Tunnel shaft

as per rule 13.75"

Dia. of Crank shaft journals

as per rule 14.45"

Dia. of Crank pin

14 15/16"

Size of Crank webs

22 3/4" x 9 1/2"

Dia. of thrust shaft under

collars

14 3/4"

Dia. of screw

18'-6"

Pitch of Screw

18'-6"

No. of Blades

4

State whether moveable

Yes

Total surface

103.14 sq

No. of Feed pumps

2

Diameter of ditto

4 1/8"

Stroke

24 3/8"

Can one be overhauled while the other is at work

Yes.

No. of Bilge pumps

2

Diameter of ditto

4 1/4"

Stroke

24 3/8"

Can one be overhauled while the other is at work

Yes.

No. of Donkey Engines

3

Sizes of Pumps

New's Feed: 8 1/2" x 6" x 18"

Gen. Service: 8 3/8" x 5 1/2" x 13 1/2"

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

4 - 3 5/8", 1-3 1/2"

Indep. Bilge Suction.

Ballast: 8 3/8" x 10 1/2" x 22 1/2"

In Holds, &amp;c.

In Nos 1, 2, 3 &amp; 4 holds. 2-3 1/2" in each.

No. of Bilge Injections

1

sizes

7"

Connected to condenser, or to circulating pump

Yes.

Is a separate Donkey Suction fitted in Engine room &amp; size

Yes 2 5/8"

Are all the bilge suction pipes fitted with roses

Yes.

Are the roses in Engine room always accessible

Yes.

Are the sluices on Engine room bulkheads always accessible

None.

Are all connections with the sea direct on the skin of the ship

No.

on cofferdam

on ship's side.

Only main Discharge

Are they

Valves or Cocks

Both.

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Yes.

Are the Discharge Pipes above or below the deep water line

Both.

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Yes.

Are the Blow Off Cocks fitted with a spigot and brass covering plate

Yes.

What pipes are carried through the bunkers

Bilge Suctions.

How are they protected

Wood casing.

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Yes.

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Yes.

Is the Screw Shaft Tunnel watertight

Yes.

Is it fitted with a watertight door

Yes.

worked from

ER platform.

BOILERS, &amp;c.—(Letter for record)

Manufacturers of Steel

J.S.B.

Total Heating Surface of Boilers

7560 sq

Is Forced Draft fitted

Yes.

No. and Description of Boilers

3. S. Ended, multitubular.

Working Pressure

220

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Yes.

Area of fire grate in each boiler

50 sq

No. and Description of Safety Valves to

each boiler

2 Spring Loaded.

Area of each valve

9.62 sq

Pressure to which they are adjusted

220 lb.

Are they fitted with easing gear

Yes.

Smallest distance between boilers or uptakes and bunkers or woodwork

11"

Mean dia. of boilers

14'-3 1/2"

Length

12'-0"

Material of shell plates

Thickness

1 1/2"

Range of tensile strength

Are the shell plates welded or flanged

No

long. seams

DRS. QR.

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

1'-9"

Lap of plates or width of butt straps

2'-7 3/4"

Per centages of strength of longitudinal joint

rivets: 98.6%

plate: 93.0%

Working pressure of shell by rules

245

Size of manhole in shell

22" x 17 3/8"

Size of compensating ring

McNells.

No. and Description of Furnaces in each boiler

3 Deighton

Material

Rule

diameter

3'-5 3/4"

Length of plain part

top

Thickness of plates

crown

bottom

Description of longitudinal joint

Welded.

No. of strengthening rings

hil:

Working pressure of furnace by the rules

225

Combustion chamber plates: Material

Thickness: Sides

1/8"

Back

3/4"

Top

1/8"

Bottom

7/8"

Pitch of stays to ditto: Sides

9 x 7

Back

9 1/2 x 7 1/2

Top

7 1/2 x 7 1/2

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

242 lb.

Material of stays

Area at smallest part

2.07

Area supported by each stay

63 sq

Working pressure by rules

263

End plates in steam space:

Material

Thickness

1 1/8"

Pitch of stays

14 1/8 x 14 1/8

How are stays secured

D.N.

Working pressure by rules

228

Material of stays

Area at smallest part

6.77 sq

Area supported by each stay

221 sq

Working pressure by rules

318

Material of Front plates at bottom

Thickness

1"

Material of Lower back plate

Diameter of tubes

2 3/4"

Pitch of tubes

3 3/8" x 3 3/8"

Material of tube plates

Thickness: Front

1 1/8"

Back

1 5/16"

Mean pitch of stays

9 1/8"

Pitch across wide water spaces

14 1/4"

Working pressures by rules

228

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

10 1/4" x 15 1/2"

Length as per rule

2'-4"

Working pressure by rules

242

Steam dome: description of joint to shell

hous

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

2020

SUPERHEATER. Type

hous.

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Is Easing Gear fitted

Diameter of Safety Valve

Pressure to which each is adjusted

Lloyd's Register Foundation

Form No. 1A. — 1m. 8.20. T.

W48-0180



IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded? ✓

SPARE GEAR.

State the articles supplied:—

1 Crank shaft, 1 screw shaft, 1 Air pump rod, 4 main bearing bolts, 4 nuts, 4 sq. end bolts & nuts, 2 bottom end bolts & nuts, 16 coupling bolts, 4 nuts, 2 eccentric straps, 6 cylinder cover studs & nuts, 12 piston ring studs & nuts, 1 piston for each cylinder, 1 valve spindle, 1 crank pin bush, 2 crosshead bushes, 4 feed pump valves & seats, 4 bilge pump valves & seats, 1 safety valve spring, 1 Bram propeller blade, 16 plain boiler tubes, 9 stay tubes, Assorted bolts & nuts. Iron of various sizes.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building  
During progress of work in shops - -  
During erection on board vessel - - -  
Total No. of visits

Is the approved plan of main boiler forwarded herewith

No.

Dates of Examination of principal parts—Cylinders

Slides

Covers

Pistons

Rods

Connecting rods

Crank shaft

Thrust shaft

Tunnel shafts

Screw shaft

Propeller

Stern tube

Steam pipes tested

Engine and boiler seatings

Engines holding down bolts

Completion of pumping arrangements

Boilers fixed

Engines tried under steam

Completion of fitting sea connections

Stern tube

Screw shaft and propeller

Main boiler safety valves adjusted

Thickness of adjusting washers

Port Riv

Centre Riv

Star Riv

Material of Crank shaft

Identification Mark on Do.

Material of Thrust shaft

Identification Mark on Do.

Material of Tunnel shafts

Identification Marks on Do.

Material of Screw shafts

Identification Marks on Do.

Material of Steam Pipes

Steel

Test pressure

600 lbs.

Is an installation fitted for burning oil fuel

No.

Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case

No.

If so, state name of vessel

General Remarks

(State quality of workmanship, opinions as to class, &c.)

The Engines & Boilers of this vessel have been opened out & examined, & the materials & workmanship found good.

After having carried out the repairs recommended the Machinery was tried under steam & found to work satisfactorily.

The Machinery throughout is now in good & efficient condition, & eligible in my opinion to have the record of L.M.C. 7.21. marked in the Society's Register Book.

The amount of Entry Fee ... £ :  
Special ... £ 30 :  
Donkey Boiler Fee ... £ :  
Travelling Expenses (if any) £ :

Committee's Minute FRI. 12.11.1921

Assigned L.M.C. 7.21

C. N. Stuart.

Engineer Surveyor to Lloyd's Register of Shipping.



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